

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/09726

A. CLASSIFICATION OF SUBJECT MATTER

IPC: G01B 9/02(2006.01)

USPC: 356/502; 73/655,657

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 356/502; 73/755

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
EAST

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 6,008,906 A (Maris) 28 December 1999 (28.12.1999), column 3, 40 + | 1-17 |
| A | US 4,046,477 A (Kaule) 6 September 1977 (6.09.1977), column 4, lines 10 +. | 1-17 |
| A | US 5,546,187 A (Pepper et al.) 13 August 1996 (13.08.1996), Figure 2. | 1-17 |



Further documents are listed in the continuation of Box C.



See patent family annex.

| | |
|---|--|
| Special categories of cited documents: | |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "E" earlier application or patent published on or after the international filing date | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "O" document referring to an oral disclosure, use, exhibition or other means | |
| "P" document published prior to the international filing date but later than the priority date claimed | "&" document member of the same patent family |

Date of the actual completion of the international search

02 March 2006 (02.03.2006)

Date of mailing of the international search report

24 MAY 2006

Name and mailing address of the ISA/US

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Please See Continuation Sheet
3. ☒ Claims Nos.: 3-17
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

- Remark on Protest
- | | |
|--------------------------|---|
| <input type="checkbox"/> | The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee. |
| <input type="checkbox"/> | The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation. |
| <input type="checkbox"/> | No protest accompanied the payment of additional search fees. |

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Continuation of Box II Reason 2:

Claims 3-17 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because claims 3-17 are indefinite for the following reason(s): Each claim is dependent on "any previous claim" which results in limitations that contradicts the previous claim. For example, claim 4 recites that the laser operates at or around 1.064 microns, yet previous claim 2 recites that the laser operates at or around 1.5 micron. Is claim claiming that the laser operates at or around 1.5 micron or 1.064 micron. Furthermore, the use of "at or around" is vague and indefinite. What entails "at or around"? Is 6.5 microns at or about 1.064 micron?

The same contradiction applies to claims 6 and 7. For claim 7 which can depend on claim 6, does the laser source include an electro-optic modulator in addition to the Mach Zehnder modulator of claim 6? The same contradiction applies to the rest of the claims.

As for claim 17, the method lacks any positive novel step.